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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,229	01/31/2005	Jonathan Hughes	IA/3-2233/PCT	8035

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EXAMINER

HRUSKOCI, PETER A

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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09/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,229	Applicant(s) HUGHES, JONATHAN	
	Examiner /Peter A. Hruskoci/	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brink 4,384,897. Brink disclose (see col. 5 line 25 through col. 11 line 7) a process for separating an aqueous mixture including solid matter resulting from acid hydrolysis of a naturally occurring carbohydrate substrate, and a process for producing a fermentation product substantially as claimed. The claims differ from Brink by reciting the use of acid having a specific pKa and concentration. It is submitted that the sulfuric and hydrochloric acids disclosed in Brink would appear to have the recited pKa. It is further submitted that the pH of 2 to 3 utilized in the first stage hydrolyzer of Brink would appear to include an acid concentration patentably indistinguishable from the acid concentration recited in the instant claims. It would have been obvious to one skilled in the art to modify the process of Brink by utilizing the recited pKa and concentration, to aid in hydrolyzing the carbohydrate or polysaccharide. The specific pKa and acid concentration utilized, and amount of flocculating agent added, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific material hydrolyzed and solid matter separated, and results desired, absent a sufficient showing of unexpected results.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brink as above, and further in view of Foody et al. 6,090,595. The claim differs from Brink as applied above by reciting that the solid matter is subjected to a specific washing cycle. Foody et al. disclose (see

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col. 2 lines 33-46) that it is known in the art to wash separated or filtered solids from acid hydrolysis of cellulose, to aid in recovering glucose from the solids. It would have been obvious to one skilled in the art to modify Brink as applied above, by utilizing the recited washing cycle in view of the teachings of Foody et al., to aid in recovering sugars or glucose from the solids.

Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brink as above, and further in view of Moffett 6,132,625. The claims differ from Brink by reciting that the flocculating agent includes specific polymers or charged microparticulate material. Moffett disclose (see col. 3 line 3 through col. 6 line 39) that it is known in the art to add a flocculating agents including polymers and anionic microgels, to aid in flocculating biosolids present in aqueous streams including sugars and carbohydrates. It would have been obvious to one skilled in the art to modify the process of Brink by addition of the recited polymers and microparticulate material in view of the teachings of Moffett, to aid in separating solids from the aqueous liquid phase.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/523,230 or claims 1-22 of copending Application No. 10/523,302. Although the conflicting claims are not identical, they are not patentably distinct from each other because the process steps recited in the instant claims appear to be fully encompassed by the claims of the copending applications.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant argues that according to Brink, the flocculation occurs in the neutralization unit 156, after neutralization of the acid, and the flocculating agents are not added to the acidic solids bearing mixture. It is submitted that neutralization of the aqueous mixture during the separation step or stage is not excluded from the instant claims. Brink as applied above appears to add ferric and aluminum salts or flocculating agents to an acidic solids bearing mixture in the stage I hydrolyzer.

Applicant argues that what is flocculated according to Brink are the solids resulting from neutralization, whereas according to the present application the flocculating agents serve to remove solid residue comprising the direct residue which has not been hydrolyzed. It is submitted that the finely dispersed solids flocculated in Brink appear to be solids or residues that have not been hydrolyzed. It is further submitted that the neutralization of solids or solids residue is not excluded from the instant claims.

Applicant alleges that one skilled in the art would not consider the process of Foody, as the process is carried out enzymatically which differs from the acidic hydrolysis described by Brink. It is submitted that the hydrolysis of Foody appears to be carried out at an acidic pH of 5. Furthermore, applicant has not supplied sufficient factual evidence to support the above allegation.

Applicant argues that there is no direction for one skilled in the art to modify the process of Brink by replacing the ferric and aluminum salts used as flocculants by the anionic colloids and cationic polymers of Moffett, because the flocculants of Moffett would not fulfill the additional catalyst function. It is submitted that the teachings of Moffett as applied above, appear to also disclose that it is known in the art to use a combination of iron or aluminum salts, anionic colloids, and polymers, to aid in flocculating and separating biosolids in aqueous streams including carbohydrates or sugars. It would have been obvious to one skilled in the art of liquid purification having the teachings of Brink and Moffet before him, to modify the process of Brink by the further addition of the recited polymers and microparticulate material in view of the teachings of Moffett, to aid in separating solids from the aqueous liquid phase.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Peter A. Hruskoci/ whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter A. Hruskoci/
Primary Examiner
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3/11/08

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	10/523,229	HUGHES, JONATHAN	
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